Rural Lines

JULY 1954

ELECTRIFICATION SECTION

TELEPHONE SECTION

RURAL ELECTRIFICATION ADMINISTRATION ● U. S. DEPARTMENT OF AGRICULTURE

A Message from the ADMINISTRATOR

It has been said that the best government is the least government. With that general philosophy I most heartily concur. But I think most of us agree that some programs require Government help at least to get the job started.

The rural electrification program is one in which, to my mind, the Government has played an important part. And a sensible part, because so much of the control and responsibility has been held right where control and responsibility belong—in your hands, the hands of the local people. As a result of its performance along this line, the REA operation is accepted by the people of the country as a program of great value.

In line with the local control philosophy of government, there should be a continuing shift from Federal responsibility to action and responsibility by the people themselves.

In response to this we in REA during the last year have attempted sincerely to alert our borrowers to their responsibilities. We have shifted to them activities formerly paid for by the Government and this has required our borrowers, the electric cooperatives, to assume greater responsibilities—responsibilities that really are theirs to perform.

This shift is good from at least two standpoints. First, it cuts governmental costs. It appears now that the savings to the Government because of the changes we have made will amount to about three-quarters of a million dollars a year to the United States Treasury. I feel sure that all citizens support a program of thrift in Government. The national debt is a problem of concern and any effort that can be made to effect savings is a responsibility of each one of us.

Second, to the extent the REA co-ops build their own self-reliance, the electric program will grow into a healthy, locally controlled and operated program. It is insurance that we will keep the electric system serving us.

As a farmer, I do not want my power supply or the operation of the electric system that serves me dependent upon services from the Government. I want my system to be entirely self-supporting and responsive to my needs as a farmer. I think you do, too.

Norman Nelson

Administrator.

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We've been asked about . . .

section 5 loans

(New emphasis on power-use promotion as a protection for REA loan security has stimulated interest by borrowers in the so-called section 5—or consumer facilities—loans available from REA. The questions and answers following are designed to clarify present policies concerning this phase of the program.)

1. What is REA's authority for making consumer loans?

Section 5 of the Rural Electrification Act authorizes the Administrator to make loans to finance the wiring of premises and the acquisition and installation of electrical and plumbing appliances and equipment for consumers in rural areas. Such loans may be made to any REA borrower providing, or about to provide, rural electric service.

2. Is REA currently making section 5 loans?

Yes. In the period from July 1, 1953, through April 30, 1954, the Administrator approved 33 loans under section 5, amounting to $1,873,000. Sixteen of these have been signed since January 1, 1954, with 9 in April.

3. What is REA's general attitude on consumer financing? Should it be done through section 5 loans, or through other sources?

REA's position is that wherever consumer financing is available to an adequate extent, it should be used. However, REA is making these loans and will continue to make them where a lack of consumer credit exists, particularly where such credit is essential in the conduct of a power-use program aimed at improving the financial security of the borrower.

4. It is reported that REA will not make a section 5 loan of more than $50,000. Is this correct?

No. It is our policy, to assure a more frequent review of local conditions and to avoid unnecessary obligation of loan funds, to hold section 5 loans to an individual cooperative to not more than $50,000 per loan. However, we have made exceptions where a definite need was shown for a larger amount. Two notable recent exceptions are a $100,000 loan to the Blue Ridge Electric Membership Corporation, Lenoir, N. C., and a $300,000 loan to the South Kentucky Rural Electric Cooperative, Somerset, Ky. Both of these borrowers have extensive power-use programs underway, and adequate local financing was not available.

5. What are the terms for section 5 loans?

The loans are made for a period not to exceed 5 years and bear interest at 2 percent per year. Interest does not start accruing until funds are actually advanced.

6. What is the primary requisite for eligibility?

Section 5 loans may be made to any borrowers of funds loaned under provisions of section 4 (to provide electric service to people in rural areas), where the borrower involved is authorized, under applicable State law, to finance consumers' equipment.

7. What do borrowers have to do to obtain section 5 funds?

It is the borrower's responsibility to establish and show:

(1) The estimated extent to which the funds would improve repayment capabilities, and

(2) The necessary consumer financing cannot be obtained from regular commercial or financial sources.

Borrowers applying for section 5 funds should include a statement from or the report of an interview with local bank representatives with respect to the availability of credit for the desired purposes. In a recent loan application, the REA borrower reported that its local bank president had referred farmers to the cooperative for appliance loans.

8. Are these loans restricted to the financing of particular pieces of equipment?

Of course, the equipment must be predominantly electrical in use, and primarily for the improvement electrically of the farming operations or family living standards. Within these limitations and according to REA policy, manufactured wiring, plumbing, and electrical equipment for the farm and household which meets the minimum requirements established by a recognized national organization such as the American Standards Association, Bureau of Standards, and professional engineering societies, or is approved by recognized testing organizations, such as Underwriters' Laboratories, usually will be satisfactory for financing.

9. What about rewiring of farmsteads?

Yes, if the loan is otherwise proper under section 5.

10. Is there a list of items which may be financed with section 5 loans?

No. REA does not maintain a list of approved or acceptable farm and household equipment or appliances that may be financed under section 5 loans. However, items that are known to impair service on rural systems, or that are inconsistent with good operating practices, should not be financed with these funds.

11. How does a borrower show "need" for section 5 funds?

If consumers on a borrower's system cannot obtain adequate local financing for equipment needed in their homes or on their farms, or if the borrower can show that it has a definite and active power-use program underway that will stimulate the purchase of additional farm and home electrical equipment, this may be considered need for the loan.

In one recent application, the borrower stated that it had three electrification advisers employed, working with members to develop greater use of electric power, aimed at improving the members' standards of living, and at the same time improving the borrower's financial position. This borrower also showed that as a result of an earlier loan, the appliances sold under its consumer loan program and placed on the borrower's lines, had already increased the monthly revenue of the borrower by about $1,500.

12. Does REA set any standards to govern the handling of section 5 funds by the borrower?

Yes. REA has set the following terms for borrowers of consumer financing:

1. The maximum amount outstanding of any such loan to a consumer at any one time shall be no more than $2,500, unless the REA borrower receives prior approval from REA for a larger amount.

2. The repayment period for such loans shall not exceed 5 years.

3. Special REA forms are to be used in making consumer loans except in States where special forms and procedures, approved by REA, have been devised to meet special conditions.

4. The terms and conditions must comply with regulations of Federal and State agencies governing consumer financing and credit transactions.

In addition to these specific requirements, REA recommends that:

1. Interest at 4 percent per year be charged on the current unpaid balance.

2. A down payment of 20 percent be required, but not less than 10 percent of the installed price.

3. Consumer payments may be on a monthly, quarterly, semiannual or annual basis. In many sections of the country farmers do not receive monthly cash income, unless they have dairy and poultry produce to market. Instead, they receive their cash when they harvest their crops or sell off livestock. REA borrowers can adjust their program so that members may pay either annually or semiannually where monthly payments would be impractical or work hardship on the consumer.

13. Have REA borrowers lost much through failure of their members to pay up these loans?

The repayment records of both REA borrowers and their consumer-members have been good. Altogether, REA has loaned $20,959,700 under section 5. More than $10,100,000 has been repaid on principal, while less than one-half of 1 percent is overdue more than 30 days.

YOUTH PROGRAM GETS RESULTS

If you consider rural youth the best crop now growing on our American farms, you may want to take a look at the details of the rural youth program carried on by the Flint Hills Rural Electric Cooperative Association, Inc., Council Grove, Kan.

This area is cow country bisected by the Santa Fe Trail. Council Grove, now celebrating its centennial, was for a long time the last stop for the wagon trains before Santa Fe, N. Mex.

The rounded mounds of the Flint Hills with a thin layer of soil covering their rock tops are claimed to be some of the best pasture lands in the country. The native bluestem grass is loaded with all the minerals and rich juices which put weight on a feeder and transform the flesh of a count-the-rib steer into tempting marbelized steaks.

When rural electricity became available in this area, dairying joined beef cattle as a farm income producer. There's also diversified agriculture along the black soil creek bottom and the gently sloping uplands.

O. E. Mabrey, manager of the Flint Hills co-op, and the members of his board are convinced that this region has a great future. They think it is important that the boys and girls who will be the future consumers, board members and community leaders, grow up with an understanding of the contribution which rural power makes to farm life. They also feel that their work with rural youth offers an excellent opportunity to inform the youngsters about the co-op itself. While parents recall preelectric days, most youngsters take electricity for granted and have little idea of how the co-op operates.

The Flint Hills rural youth program is two-pronged. One section operates through the 4–H program and the other through the Future Farmers of America. Both require different approaches. This year the joint program will reach about 500 youngsters of high school age in the system area serving around 4,000 consumers.

The pattern of the 4–H program is this: Co-op representatives meet with county 4–H councils to develop a farm and home electrification plan. Adult and junior leaders are selected for each 4–H Club. Wherever possible the adult leader is someone who knows the basic principles of electricity and has had some experience in wiring. In some instances, farm women are named adult leaders and provided with an assistant who has the necessary technical background.

The electrification leaders get two types of help from the co-op. First, there is a county training session with demonstrations and a supply

of informational materials. Second, the co-op awards each leader a $10 scholarship as part payment of expenses at the Kansas State 4–H leaders training conference.

Each electrification leader has responsibility for seeing that boys and girls in the 4–H Club get all needed advice and assistance in the use of electricity. In some instances, the safe and efficient use of electricity complements and supplements a youngster's 4–H project. In other instances, electricity itself is the project.

All 4–H Club members in the electrification program have a specific assignment. Programs are set up for beginners, intermediates, juniors, seniors, and those doing advanced work.

The beginners, for example, (1) make a pigtail splice, (2) make a place for storage of fuses, (3) make a test lamp, (4) complete workbook lessons, and (5) show other 4–H Club members a practical application of their projects.

Juniors check farmstead extension cords, lighting and wiring; make at least three pieces of electrical equipment; and make a study of their power supplier and its rates.

Members of advanced classes make at least one of the following: An electric hay or grain elevator, a portable saw, or an electric litter carrier. Alternate choices are to wire a house or wire a farmstead with switch controls at all stations.

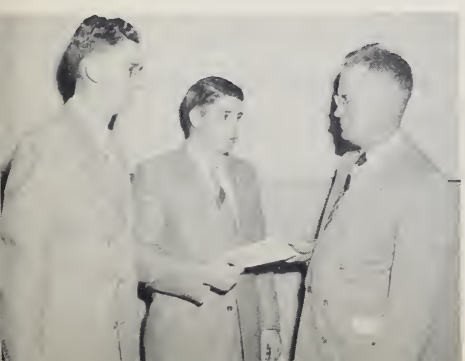
Youngsters make real accomplishments in the 4–H program. There's the example of Garry Hanneman of Peabody, Kans., whose hogs won the Kansas 1953 swine championship. With the help of heat lamps in brooding, his sows averaged 8½ pigs per litter as compared to the national average of 6 to 7.

Experience thus far in the 4–H phase of the rural youth program has convinced Manager Mabrey of the necessity of making progressive advances in the training of 4–H electrification leaders. A typical first session training program includes: (1) Lighting, (2) equipment grounding, (3) consumer safety practices, (4) hotbeds, (5) motors, and (6) electric brooding. In the next training session, new subjects and more advanced material are introduced.

In addition to individual county activity with 4–H Clubs, the co-op has for 8 years offered a circulating challenge trophy at the Tricounty 4–H Club Fair for the best electrical exhibit. Last year, a girl caused male faces to redden by running off with individual honors. Her pinup lamps, soldered perfectly, met all underwriter requirements.

In contrast to the help provided to individuals by electrification leaders in the 4–H electrification plan, the approach in the Future

Manager Mabrey presents award check to John Summerfield as County Agent Lloyd Wiseman looks on.



FFA boys hear Power Use Adviser Herink explain problems in wiring, metering, and voltage drops.

Farmers of America program is through vocational agriculture classes in rural high schools.

The FFA plan operates in vo-ag classes in 11 high schools in the system area. Arleigh Herink, power use adviser of the Flint Hills co-op, works it like this:

Early in the school year, Herink shows up at the high school on a Monday morning and usually has a 2-hour class period. He uses this time to outline the basic principles of electricity, show youngsters how to identify distribution and transmission lines out in the country and tells them how to estimate the cost of operation of major farm electrical appliances.

The co-op supplies each high school with a small motor and a kit dealing with motor winding, maintenance and use. The school also gets a miniature generating plant and information about its operation. Each school gets 30 copies of a booklet showing various farm uses of electricity. All this material becomes the property of the school.

On his first visit, Herink brings a demonstration board and runs through various tests. He shows the boys how to make test lights for use on the farm and answers their questions. The demonstration board is left for a week for the instructor and his class to use.

Assistant Manager Ridenour demonstrates hazards of inadequate wiring at 4–H recognition banquet.

On Friday, when Herink returns to the high school, he conducts a field trip for the class. He selects a nearby farm in advance and ties red tags on various wiring installations in different buildings. Each youngster has a 30-item check list and it is up to the boys to find out which are unsafe, and why.

Being an electrical detective wins the interest of most youngsters and ignites enough of a spark of interest to carry through the school term. The vo-ag instructor and his students do the job the rest of the way without co-op supervision.

In both the 4–H and the FFA programs, the co-op offers help in telling the groups where they may obtain additional information about rural power uses and as time permits gives technical help on the more difficult problems.

It is significant that in both programs, the co-op gets the work done through other organizations. No matter how much they would like to help, there's just not enough co-op personnel to give each youngster individual attention.

The results of the rural youth program are threefold. First, boys and girls are trained in the safe and efficient use of electricity; second, youngsters find out for themselves how to apply electricity in farm production; and third, the youth groups get acquainted with the cooperative and find out how it operates.

South Carolina Electric Cooperative, the statewide organization, is out with a new magazine, "Co-op Backbone," for co-op leaders.

THE LINEMAN

Oregon System's Safety Program Earns Insurance Rate Reduction

■ A job training and safety program can literally pay off—according to Manager Glen Sawyer and Foreman Harvey Roach of Lane County Electric Cooperative, Eugene, Oreg.

They are confident that the intensive training and safety program they started 2 years ago, which resulted in a topnotch safety record, earned the co-op the maximum 50 percent reduction from base rate on its insurance through the Oregon State Industrial Accident Commission.

In addition to cash savings, statewide recognition has come to the co-op. Its crews have been asked to participate in the Governor's Safety Council, and a crack first-aid team is being groomed for the event.

Most of the 27-man crew have earned first-aid certificates, and 9 men soon will have earned certificates for advanced training. The crew has attracted attention for several "on the job" ideas which have stepped up efficiency and eliminated unsafe procedures.

One of these innovations is a 3-pole practice unit which the LCEC crew has dubbed "Little Gem."

"The idea for our 3-pole unit was the direct result of our crews' interest in poletop resuscitation," Foreman Roach says. "Practice periods lost their punch when the fellows had to stand around while two men went through resuscitation practice. Participation is worth hours of on-looking. The 3-pole unit was our solution; it gives all the men a chance to practice every time."

Although developed primarily for pole-top resuscitation practice, the 3-pole unit is used regularly for demonstration and practice of hot-line work, for correct installation of

Manager Sawyer and Foreman Roach discuss plans for Lane County's Industrial Safety Conference.

OCTOBER CONFERENCE

The Job Training and Safety Conference is scheduled for October 4–8, 1954, at Daytona Beach, Fla. Special sessions have been planned for directors, managers, superintendents, and foremen.

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Lane County's crew practices poletop resuscitation on the "Little Gem." The men believe this 3-pole unit they designed helped win safety record.

crossarms and transformer assemblies. In fact, there are few situations in the field that can't be duplicated on the practice poles, according to Roach. Work on a pole is the same, whether it is done 4 feet from the ground or 40 feet up.

Construction of the unit is simple, and its parts are inexpensive. These materials are needed for its construction:

3 untreated cedar poles, 10 inches in diameter, 12 feet long. (LCEC used remnants obtained from the pole yard.)
6 pieces, 2 x 6 (No. 2 or better), 10 feet long.
12 machine bolts, 5/8-inch.
24 washers.

"The actual construction is nothing more than a bolting together process," Roach says. "It is important that the poles be mortised so the connecting boards will be flush with the pole and strengthen it."

Roach advises numbering the poles and boards, top and bottom, to make assembling an easy job. His experience shows that three men can put up the unit in 20 minutes, and that two can dismantle it in 15 minutes.

Manager Sawyer says that practice poles are going to be permanently installed at the co-op's new headquarters building now under construction. He considers them vital in training the crews.

Pioneer in Rural Electrification

You may think of pioneers as graybeards, who like to dwell on accomplishments of the past, but Pioneer Rural Electric Cooperative, Piqua, Ohio, has a pioneer in the rural electrification program who doesn't fit that picture at all.

A. E. Halterman, manager of the co-op, got into the pioneering business right after the Executive order creating REA was issued in May 1935. He was hired by the Ohio Farm Bureau to promote rural electrification. Mr. Halterman did—by organizing farmers into rural cooperatives to buy and distribute their own electric power. So rapid and thorough was his organizing, that by June of 1936 the first project in Ohio was energized.

In 1937 Mr. Halterman became manager of the Pioneer Electric Co-op, which he had helped organize. Pioneer was the first borrower in Ohio, and lays claim to having set the first co-op pole in the United States on November 14, 1935.

No pioneer to rest on his laurels, however, Mr. Halterman went on to pioneer in the organization of the statewide association. He was secretary-treasurer until a State office was established.

In this connection, he did an outstanding job of negotiating a "pool" for the Ohio co-ops to buy poles during the wartime shortage. He was also one of the trail-blazers in organizing a State job-training and safety program for co-ops.

Having made a habit of organizing, Mr. Halterman helped in the formation about 3 years ago of the Ohio Rural Electrification Council to coordinate power use activities of the power companies and the rural electric co-ops. Actually, this was an extension of his early program with his own co-op in setting up a member education plan and power utilization program back in 1937.

One of Mr. Halterman's major achievements has been in the field of employee relations. He has built up an organization that reflects the spirit of cooperation to members and to the public. He has done this by selecting the right person for the job and then letting that person have freedom of initiative and expression.

Before his work with the rural electrification program, he had been a county agricultural agent, had worked with Ohio power companies, and had taught vocational agriculture for several years. He was graduated from Ohio State University in 1920.

Dairyland's Movie

■ Dairyland Power Cooperative, La Crosse, Wis., John P. Madgett, general manager, is busy with showings of its recently completed motion picture titled, "More Power to You." The 16-mm. sound film is in color and runs about 23 minutes. Members and employees handle all the acting sequences. Purpose of the film is to make the co-op better understood.

Pennsylvania Rural Electric Cooperative Association, statewide organization, is circulating an illustrated 24-page booklet which tells the story of rural electrification in the State. The publication also gives basic information about rural electric systems.

Grand River Electric Cooperative, Bison, S. Dak., Abner J. Thoreson, manager, ran a 2 months' promotion on clothes driers in cooperation with area dealers. Results? Thirty-two members have new driers. The co-op offered each member a credit of $9 on his power bill during the campaign period.

The **Little Ocmulgee Electric Membership Corp.,** Alamo, Ga., devotes entire contents of recent newsletter to a report on how the poultry business can help farmers supplement income. Radiant floor brooding is mentioned as one way to increase chick returns.

Lyon County Electric Cooperative, Emporia, Kans., O. F. Perry, manager, reports that 1,412 appliance survey cards out of 1,700 were returned by members. Members were using 79 different appliances. There were 114 television sets and 114 milking machines, and 613 motors. Radios, 1,393, lead the list.

Edgecombe-Martin County Electric Membership Corp., Tarboro, N. C., G. Leslie Rucker, manager, recently presented electric heaters as prizes to women who were winners of home demonstration club projects. Each year the co-op budgets a certain amount to sponsor projects for farm organizations like home demonstration clubs and 4-H clubs. The activity is carried on in cooperation with county agents and home demonstration agents.

POWE
EXCH

The **Co-op Electric Co.,** St. Ansgar, Iowa, is pushing an "All Electric Farm" campaign. Members get a metal sign reading, "This is An All Electric Farm operated by ----------," if they use all of the following: (1) Electric range, (2) electric water heater, (3) deep freeze, (4) pressure water system, (5) electric refrigerator, and (6) electric washing machine. Another rule is that all wiring must meet code requirements.

The member showing the largest number of uses of electricity on his farm will be awarded the first sign and get his picture published in the newsletter.

Turner-Hutchinson Electric Cooperative, Marion, S. Dak., prints the names of 78 members who installed electric clothes dryers during a 3 months' campaign developed in cooperation with area dealers.

Lorain-Medina Rural Electric Cooperative, Inc., of Wellington, Ohio, prints meter reading cards on the back page of the newsletter. They detach as indicated. On the other side of the card is the address of the cooperative.

R USE
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Parke County Rural Electric Membership Corp., Rockville, Ind., Reuben Dooley, manager, installed meters on five automatic clothes driers for a year. Monthly kwh. averaged 59 and monthly cost $1.23. The co-op has a policy of installing clothes driers, water heaters, and electric ranges without charge for labor and furnishing material at cost.

Two Missouri rural electric systems, **Louis County Electric Cooperative** of Lewiston and **Missouri Rural Electric Cooperative** of Palmyra, were featured in a recent three-quarter page feature story in the Quincy (Ill.) Herald-Whig.

Codington-Clark Electric Cooperative, Watertown, S. Dak., offers newsletter space each issue to the county extension agent, the home demonstration agent, and the SCS Work Unit Conservationist.

J. R. Carroll, agricultural engineer for **Delaware Electric Cooperative** of Greenwood, Del., uses the newsletter to promote electric drills for farm home use. Theme of the story is that women have more need for them than men. Photos with the story show women installing wall brackets and polishing brass lamps with the buffer.

Leavenworth-Jefferson Electric Cooperative, McLouth, Kans., offers a special service to members seeking farms to rent. Location, size, and ownership are listed for 150 vacant farms in the four-county area.

Dick Smith, manager, **Whitley County Electric Membership Corp.,** Columbia City, Inc.: "In January of 1948 our average consumption per consumer was 210 kilowatt hours per month. Now comes January 1954 and our consumers are averaging 480 kilowatt hours a month."

New Slant On Depreciation

A new approach to depreciation, which places considerably more responsibility on borrowers, has been worked out by REA for the electric program. REA strongly recommends that the new plan be used as of January 1, 1954, and it will be required as of January 1, 1955.

A principal feature of the new approach is that REA recommends not actual depreciation rates to be used but a range of rates from which borrowers select according to local conditions. Formerly, for example, every borrower was asked to depreciate its total distribution plant at 3.48 percent a year. Now the borrower will compute that percentage for its own particular system by selecting appropriate rates from a range of percentages suggested by REA. Generally speaking, depreciation rates under the new system will be somewhat lower than those formerly in use.

The change was made after exhaustive study and the rates conform generally to rates being used throughout the electric industry, as reported to the Federal Power Commission.

Depreciation accounting, as practiced in the utility industry, is simply the writing off of the net cost of electric plant over the life of the plant. It does not include the concept, held by some, that depreciation is to provide the necessary funds for replacement of plant or for repayment of long-term debt.

REA Bulletin 183–1, which management of your electric system has received, gives a range of depreciation rates for transmission, distribution, and general facilities. REA recommends that the middle of the suggested range of rates be used where operating conditions are considered average. In no case should the low end of the range be selected unless extraordinary conditions exist which lead to long service life.

In selecting your depreciation rates, management will want to give consideration to geographical location, climate, operating practices, maintenance policy, load conditions, and similar factors. Systems operating under extreme conditions such as those that prevail in coastal or sleet areas, or in extremely arid localities, would select a rate from near the top or bottom of the range, as appropriate.

The new lower rates will result in increased margins on co-op books. This change will not in any way affect the cash position of your business, and borrowers are urged to continue operating their systems as efficiently as possible regardless of the greater margins.

The cash equivalent of depreciation will not be enough in the future to repay the principal borrowed to construct the original plant. Thus, each borrower will have to accumulate adequate margins to have sufficient funds to pay its debt to REA.

RANGE OF DEPRECIATION RATES

Class of Plant	*Annual Depreciation Rate*
Transmission Plant	
Station equipment	2.6–3.1%
Towers and fixtures	1.9–2.4%
Poles and fixtures	2.9–3.4%
Overhead conductors and devices	2.0–2.5%
Underground conduit	1.4–1.9%
Underground conductors and devices	1.5–2.0%
Roads and trails	2.0–2.5%
Distribution Plant	
Station equipment	2.7–3.2%
Poles, towers, and fixtures	3.1–3.6%
Overhead conductors and devices	2.3–2.8%
Underground conduit	1.6–2.1%
Underground conductors and devices	2.1–2.6%
Line transformers	3.0–3.5%
Services	3.1–3.6%
Meters	2.9–3.4%
Installations on consumers' premises	3.5–4.0%
Leased property on consumers' premises	3.2–3.7%
Street lighting and signal systems	3.4–3.9%
General Plant	
Structures and Improvements (includes transmission and distribution structures)	
New, masonry	2%
New, metal permanent	2.4%
New, wood	3%
Remodeled, permanent	2.4–4.0%

(*Note.*—For structures which have an intended service life much less than permanent-type buildings generally the depreciation rate should be based on consideration of the expected service life and it should be sufficient to amortize the cost less net salvage over the period of use by the system.)

Transportation equipment	12–25%
Communications equipment	4.8–12.0%
Other General Plant	
Office furniture and equipment	3.6–6.0%
Stores equipment	3.6–6.0%
Shop equipment	3.6–6.0%
Laboratory equipment	3.6–6.0%
Tools and work equipment—heavy	3.6–6.0%
Miscellaneous equipment	3.6–6.0%

(*Note.*—Rates for generating plants are not included in the recommendations because of individual conditions and variations. For these facilities, borrowers are to establish their own rates and submit them for REA approval.)

RICE and IRRIGATION

A New Era Dawns in the Changing South

IF YOU WANT to view first hand what happens to rural electrification when the agriculture of an area starts to change, then drop down to the Mississippi Delta country around Clarksdale and Lyon, Miss., where the Coahoma Electric Power Association is in the middle of such a transition.

Three years ago, not 1 acre of rice was being grown in the area served by the rural electric system. There was not one irrigation pump. Today more than 19,000 acres are planted to rice and some 50 flood irrigation pumps are working or are being installed.

From the farm standpoint the change is significant in that the one-crop system, with cotton as king, is going. Cotton plantations here average around 800 acres in size with some running as high as 35,000.

From the rural electrification standpoint, if you are manager of a rural electric system, the change emphasizes the fact that you have to be on the alert to do an effective job of serving important new loads which develop without much warning. The new order of things also emphasizes the need for flexibility in management viewpoint so as to accept such changes as normal rather than as crises.

What is going on in this section of Mississippi is a fundamental change in how farmers farm, what they grow, how they live, and how they use electricity. Every stream which rises in the heartland of Middle America—the Mississippi Basin—has contributed something to the soil here. For years on years, crop humus, black topsoil, and lime have rolled down the great middle waterway to splash aside in time of flood and deposit themselves here. The springs trickling down Gander Ridge into countless brown-flowing Dry Creeks, Swede Creeks, and Wildcat Creeks have brought down layers of all-American silt.

It is the soil of the Mississippi bottoms. Its capacity to grow things has a great bearing on the future of rural electrification in the delta. The soil is of two types, sandy loam and "buckshot." Sandy loam produces cotton year after year. "Buckshot," a black clay which is a distant cousin of hardpan, produces good cotton less than half of the time.

When Mississippi farmers voted for cotton acreage controls, "buckshot" was the first to come out of cotton production. Someone discovered that "buckshot" was ideal for tame grass pasture. That brought in beef and dairy cattle. Since cattle need feed, more land went into corn, feed crops and winter wheat pasture. Next, someone found that "buckshot" was good for rice. Right there, the one-crop sys-

tem was on the way out. Irrigation moved in and kilowatt-hour use moved up.

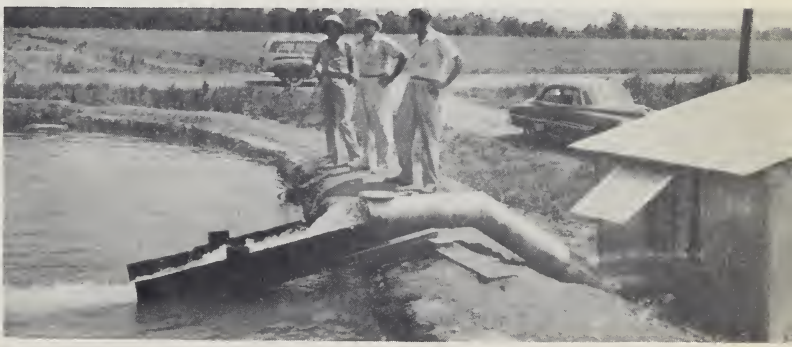
It is symptomatic of the changing farm ways of the South that rice planters are using the newest techniques. Flood irrigation starts as early as April because more and more farmers are planting rice by airplane. Rice, already sprouted, is dropped into flooded fields to seed at the rate of 400 to 500 acres a day. Rice planters claim that airplane seeding adds about 14 days to the growing season and gives the plants a head start on the weeds.

It takes big motors for flood irrigation whether the water source is a well or a river. Smallest electric motor pumping on this system is 30 horsepower, some are over 100 horsepower and most range around 50 horsepower. G. T. Alexander, manager of Coahoma Electric Power Association, and his staff figure that under average weather conditions each irrigation pump will operate about 700 hours a month during the April to September irrigation season. For a 50-horsepower motor that means more than 20,000 kilowatt-hours are used each month.

As yet the growing new load has put no special strain on the Coahoma system. For the near future, however, there's the prospect that residential air conditioning added to the irrigation load may lead to a seasonal unbalance. Promotion of electric house heating as a winter load is being considered as a way of getting things balanced and improving the yearly load-factor.

Rice planters have found that it is important that pump installations be correctly engineered. Manager Alexander, in analyzing variations in cost per acre on different plantations, found the variations principally due to: (1) Wasted water, (2) inadequate water supply, (3) motor and pump too large for acreage, (4) drought, and (5) motor too large for pump.

Although this section of the Mississippi Valley is rarely considered as part of the drought area, dry weather showed its effects in 1952 and 1953. In 1951, one rice planter with 200 acres irrigated, paid $4.26 an acre for electricity to operate a 40 horsepower motor. The dry weather of 1952 and 1953 raised his average cost per acre to $5.65 and $7.43. System officials feel confident that with normal rainfall and good engineering rice farmers may expect seasonal costs for irrigation to average around $5 an acre. Where there is both drought and poorly engineered installations, costs may nearly double this figure.



Electricity powers the motor pumping water to flood this rice field in Mississippi Delta.

In terms of dollar revenue to the rural electric system, a study of 10 irrigated farms in 1953 showed that each rice planter paid an average of $1,800 for electricity to operate his pumps. The highest bill was around $4,200, the lowest around $900.

The future irrigation load for the Coahoma system seems dependent on: (1) The increased number of rice farms, (2) increase in size of rice farms, and (3) increase in the number of farms using flood irrigation to germinate seed.

Whatever happens, there's one sure bet—rural electricity will be there, ready and able to help farmers realize the greatest possible benefits from their soil.

Geese in the Cotton

Before long the man with the chopping hoe may be a forgotten sight on cotton plantations. While rice planters use airplanes to seed rice, cotton planters are turning to geese to weed cotton. Geese won't eat cotton plants but prefer weeds. Thousands of geese are already on weed patrol and their numbers in the cotton fields increase each year.

■ Kansas Electric Cooperative, the Statewide organization, is out with a comprehensive directory listing all systems in the State and their phone numbers. Other information includes names and addresses of key co-op personnel, dates of board meetings, dates of annual meetings and listings of all State organizations connected with the rural electrification program. The 48-page booklet is packed with useful data.

Paul L. DeBolt, president, **Morrow Electric Cooperative,** Mount Gilead, Ohio: "The threshing rings, the corn huskings and the wood cuttings are a thing of the past. However, we still find it convenient and necessary to work together to accomplish some of the things we desire for ourselves and our families. We used this time-tested method to accomplish the task of bringing electricity to our homes and farms."

"Your Portable Motor" is a movie short on motor care and maintenance, and shows how to make a motor portable. It is 16 millimeters sound, black and white. Running time is about 6 minutes. Write your area director to borrow prints. The film has been cleared for use on television.

THE PEOPLE WERE PATIENT

Subscribers Accept Delays if They Know the Reasons

HOW DO YOU RALLY and maintain enthusiastic membership support around a telephone cooperative, from the time the first sign-up campaign is launched, on through until construction starts and final equity payments are collected?

All systems to some extent are faced with this problem. At times it can be really tough. At best, it takes a long time to engineer and build a telephone system after the REA loan has been approved; and people don't like to wait.

Yet, if too many back-slide, the feasibility of the whole project could be affected—and the whole community end up without adequate telephone service.

Because the problem is so important, the experience of one borrower that has been over the hurdles may help others that must travel the same road before they get telephones ringing.

Commercial companies likewise are interested in keeping their customers happy.

Yadkin Valley Telephone Membership Corp. of Yadkinville, N. C., has had to cope with the problem of long and discouraging delays. But they are beginning to see light ahead now that one exchange has cut over and a second section is nearing completion.

How have they kept going? Were there any pitfalls that they would avoid if they were doing it again? What have the leaders and manager done to keep members interested during the long wait?

Asked how the cooperative had been able to progress in the face of many unforeseen difficulties, Manager Dwight Williamson gave these simple rules:

"1. Keep sticking with it. It's a cinch that a new telephone system will never get built if the leaders stop moving ahead when the going gets tough.

"2. Keep the membership advised that something is being done—and what is being done—every step of the way. Delays aren't good. But they won't bother the rank and file members so much if they know the whole story and realize that their board and manager are on the job.

"3. Make every effort to have your facts straight before you make any promises. Don't, for example, hold out hopes for toll-free service into a neighboring exchange, unless

you have an agreement worked out with the company. *Thinking* you have an agreement isn't enough."

It has been 4 years since a charter was first issued to the Yadkin Valley Telephone Membership Corp. in July 1950. Yet the board has never stopped working to get telephones for the entire 650-mile area in Yadkin, Davie, and Iredell Counties which they represent.

You could hardly have blamed them if they had given up, Williamson feels. But the board members kept working and hoping. And they fought just as hard to get a fair connecting company agreement for the neighboring exchange as for their own. So much for sticking to the job.

With regard to the second rule—the importance of keeping the members informed, Manager Williamson had this to say:

"Some managers may feel that they are too busy to do much education work. But I don't.

"It doesn't take much effort to call the local editor when the engineer is ready to start staking lines, for example. He will be glad to run a story and probably will take a picture if you suggest a good shot.

"A news story like that helps keep members informed and happy. Also it paves the way for a letter campaign to prospective subscribers to get directory information and final equity payments. We recently sent out such letters in the Davie exchange area. Members who had paid only their initial $10 membership fee were asked to make the final membership payment if they still wanted service. Paid-up members were asked for directory information."

To make it easy to reply to the directory questionnaire, a return postcard was enclosed with the letter. About 80 percent of these cards have been returned with the necessary directory information. Though equity requirements vary with each borrower, all face the common problem of raising equity.

The appeal for final equity payments was heeded by enough lagging members to convince Manager Williamson that the mailing was worth while. Before the letters were sent out, about a hundred out of 350 members in the Davie exchange area still owed part of their membership equity payment. Since receiving the written reminder, another 40 have paid their full memberships.

Scene from the past. These old Harmony phones are now replaced by dial.

Manager Williamson expects a second follow-up letter to bring in another sizable batch of checks. After that he plans to start contacting personally the remaining members who haven't made their final equity payments.

Paid-up members who do not send

in the return postcards, confirming their original service applications and providing directory information, will also be contacted personally. The co-op is not taking any chance on running lines to the homes of people who signed up for phones a long time ago but have since changed their minds.

Manager Williamson has found that Yadkin Valley members are most discouraged because the system is not going to be able to give toll-free service into Mocksville, as they were originally led to expect. This leads to the third point—nailing down the facts before making any promises.

The promises were made in good faith. Co-op leaders thought they could easily work out an agreement with the connecting company to enable members to make toll-free calls into their trading center at Mocksville. But they haven't been able to do it.

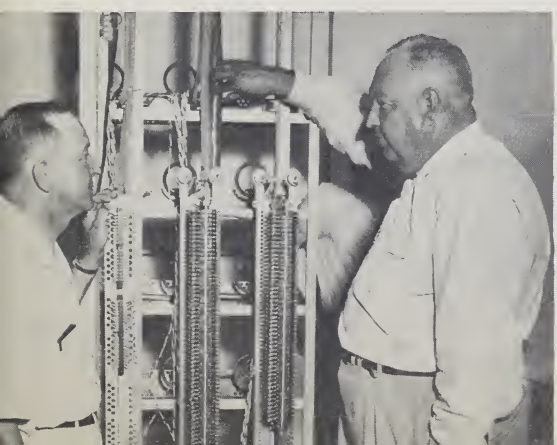
Had the new system gone in operation on schedule, hundreds of Yadkin Valley farm families would now be enjoying telephone service for the first time. And the cash register would be clicking up their monthly service payments to defray current expenses and help repay the Government loan.

That is why the directors and Manager Williamson feel so keenly that it is important for co-op leaders to come to a clear understanding with connecting companies at the outset—and give prospective members from the very beginning full and accurate information about rates and the service they will receive.

In this way they will not hold out hopes of toll-free service to a nearby exchange unless there is clear evidence of a community of interest and unless extended area service is economically feasible and acceptable by the other telephone companies. By having an EAS agreement in writing before they promise anything, Manager Williamson feels, they can avoid misunderstandings which might develop.

New preloan procedures by which REA is trying to speed up the time between the original application and start of construction also promise to help more recent loan applicants. It's much easier to keep subscriber interest at a high pitch if the loan moves steadily ahead.

Good news is a powerful boost to solidify support around a community enterprise.



When the co-op cut over its dial central office at Harmony, board president J. M. Parks came to admire the automatic equipment with C. V. Henkel.

News! The Yadkin Ripple ran this picture when the co-op started staking lines.

Since Yadkin Valley Membership Corp. cut over its first exchange at Harmony, waning interest in other exchange areas has taken an upswing. This has been helped by the fact that co-op leaders from other sections have visited the Harmony exchange and heard testimonials from satisfied subscribers.

Fortunately, the co-op has been able to send further good news to its Harmony subscribers. A letter has gone out announcing that the neighboring company has agreed to provide subscribers in the Harmony exchange area with extended area service into Statesville. This will mean a higher monthly bill in order to cover the costs of the service—in this case, about 25 cents a month on the average telephone bill. Luckily, however, the reduction in excise taxes on local telephone service recently approved by Congress will help to offset this cost.

Subscribers in the other exchanges will hear the good news too—and know that the co-op is still trying to get them the kind of service they want at a price they can afford.

About 50 key men in the various areas are helping carry progress facts home to families in their communities. Once the local leaders are convinced, their neighbors usually follow along.

The need is there. And Yadkin Telephone Membership Corp. is out to meet this need with its new system which will bring dial telephone service to over 3,000 North Carolina farm families within its service area. More than three-fourths of these now have no telephone service at all.

As the co-op sees it, their new dial system is going to help the community more than anything since electricity and farm-to-market roads.

CRANK to DIAL • *57 Years*

When the West Jersey Telephone Co., Belvidere, N. J., cut over its exchange at Blairstown to dial service on April 1, it did so on the anniversary of the installation of the first phone in Blairstown in 1897.

Simultaneously with the Blairstown cutover, the company converted its Columbia exchange to dial service. The new exchanges provided automatic service to 600 subscribers, with about 200 more subscribers added since the cutover.

The April conversions were part of a 3-year improvement program undertaken by the company with a $943,000 loan from REA in 1952. Next on the schedule for dial service are the exchanges at Hope and Oxford; the first was made in September 1952 at Great Meadows.

C. Wallace Vail is owner of the company and his son, Craig Vail, is company manager. During the past 2 years, while preparations have been made for the dial system, more than 60 miles of pole line extensions have been completed. The Vails say that on completion of their improvement program, telephone service will be available to about 95 percent of the residents of north Warren, "an enviable record in a rural area."

On the occasion of the cutover, the Blairstown Press carried an historical account of telephone service in the community, going back to 1878 when the Press first reported that the town was to get a telephone. But events delayed that happy day until April 1, 1897.

LOANS APPROVED MAY 1 THROUGH MAY 20, 1954

ELECTRIFICATION

$490,000	Florida Keys Electric Cooperative Association, Tavernier, Fla.
530,000	Anoka Electric Cooperative, Anoka, Minn.
290,000	Roseau Electric Cooperative, Roseau, Minn.
112,000	McCook Electric Cooperative, Salem, S. Dak.
400,000	Valley Electric Membership Corp., Natchitoches, La.
280,000	Big Flat Electric Cooperative, Malta, Mont.
346,000	East Central Electric Association, Braham, Minn.
130,000	Halifax Electric Membership Corp., Enfield, N. C.
900,000	Tri-County Rural Electric Cooperative, Mansfield, Pa.
210,000	York County Electric Cooperative, York, S. C.
390,000	Slash Pine Electric Membership Corp., Homerville, Ga.
135,000	Leavenworth-Jefferson Electric Cooperative, McLouth, Kans.
490,000	Pennyrile Rural Electric Cooperative, Hopkinsville, Ky.
153,000	Southern Nebraska Rural Public Power District, Grand Island, Nebr.
$1,171,000	Northern Electric Cooperative Association, Virginia, Minn.
1,175,000	Yazoo Valley Electric Power Association, Yazoo City, Miss.
440,000	South Central Membership Association, Nelson, Nebr.
735,000	Randolph Electric Membership Corp., Asheboro, N. C.
61,000	Northern Rio Arriba Electric Cooperative, Chama, N. Mex.
835,000	East Central Oklahoma Electric Cooperative, Okmulgee, Okla.
1,750,000	Rio Grande Electric Cooperative, Brackettville, Tex.

TELEPHONE

$301,000	East Otter Tail Telephone Co., Perham, Minn.
80,000	Richland-Grant Telephone Cooperative, Blue River, Wis.
542,000	Skagit Valley Telephone Co., Mount Vernon, Wash.
1,239,000	Federated Telephone Cooperative, Benson, Minn.
128,000	Runestone Telephone Association, Barrett, Minn.
1,970,000	Eastern Illinois Telephone Co., Rantoul, Ill.
525,000	Vernon Telephone Cooperative, Westby, Wis.

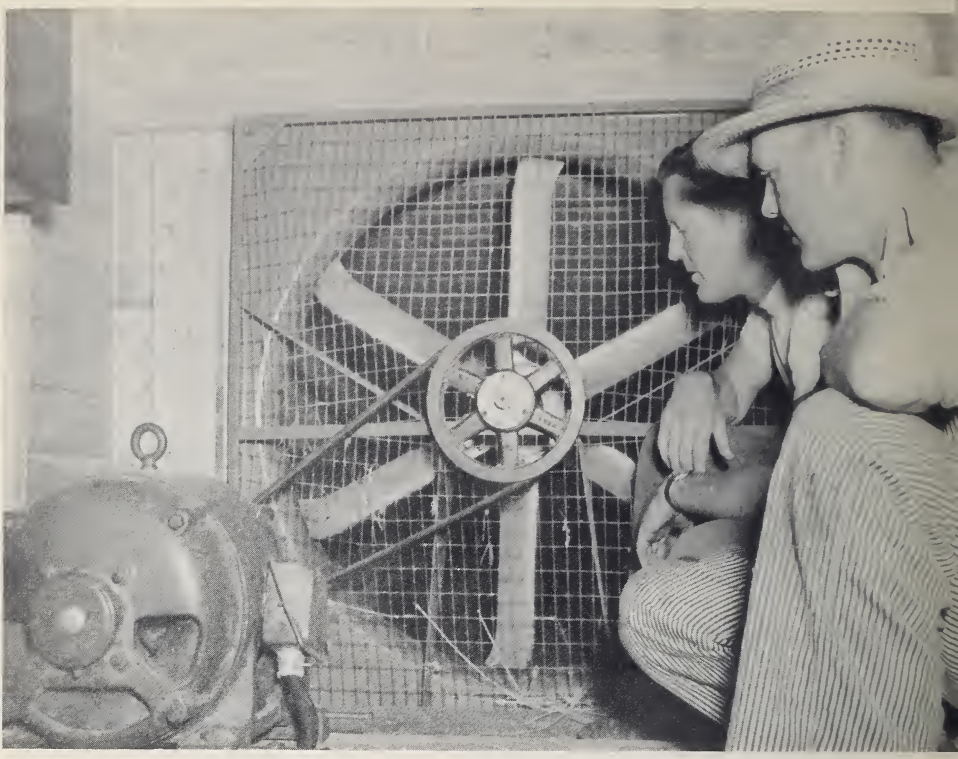
Southern Maryland's crew goes on location near Hughesville to film scenes showing preventive maintenance for poles.

"Pole Inspection and Maintenance," a new 16-mm. color and sound film is now available from REA. Running time is about 20 minutes.

The film is designed to acquaint REA borrower management with some of the problems of pole maintenance. It shows how to inspect a pole, how to determine extent of damage if any, and recommended treatments to prolong its service life. The film has been cleared for use on television shows.

To borrow prints, write to your area director or, for telephone borrowers, to the Chief, Telephone Operations and Loans Division, REA.

U. S. GOVERNMENT PRINTING OFFICE: O—1954



Saving Stored Grain

The biggest grain storage job in history is coming up with this season's harvest. With total supplies expected to reach all-time record levels, the shortage of storage space may be from 150 to 250 million bushels.

Providing storage on his own farm is one way a farmer can be sure he has a place for his crop, so that he can market it in an orderly way and get a price advantage on his grain. There may be substantial loss if the crop has to be dumped on a glutted market, or cannot be handled properly at the time of harvest.

Farmers with electricity can protect their stored grain through proper crop conditioning. For rural electric systems, crop conditioning, generally, is a good offpeak power load. REA electric borrowers can use section 5 loans to help members finance installations of electric drying equipment. There are now a number of portable, forced-air units on the market. Farmers who already have electric motors and suitable ventilating fans can adapt them to drying grain.

The United States Department of Agriculture, Washington 25, D. C., has bulletins available on grain storage and the use of electricity in crop conditioning.